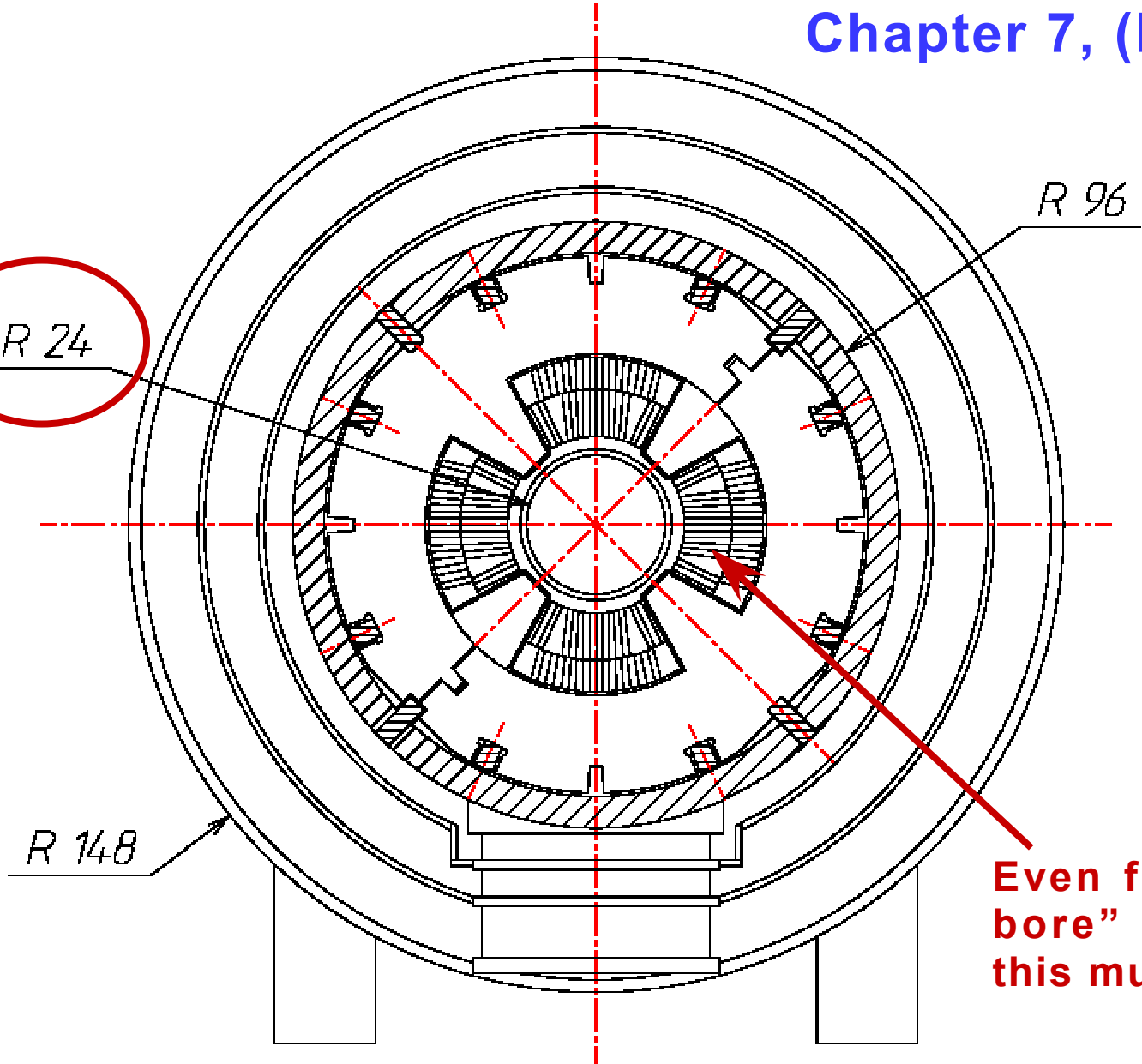


Taken from TESLA TDR
Chapter 7, (Fig. 7.4.7)

Note: R 24

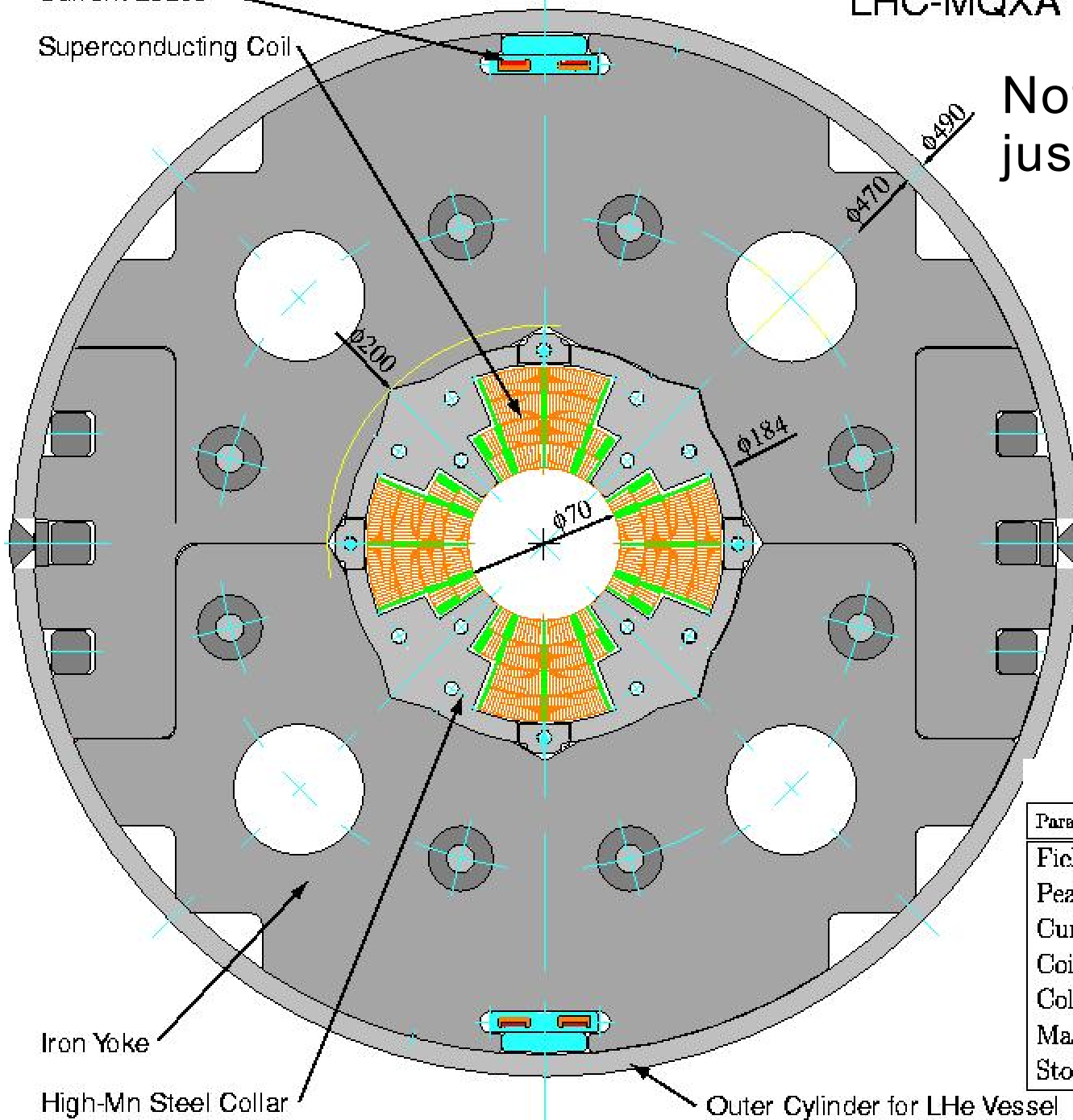


Even for a "smaller bore" already need this much conductor.

LHC-MQXA

Current Leads

Superconducting Coil



Note: almost 0.5 m OD just for a bare cold mass

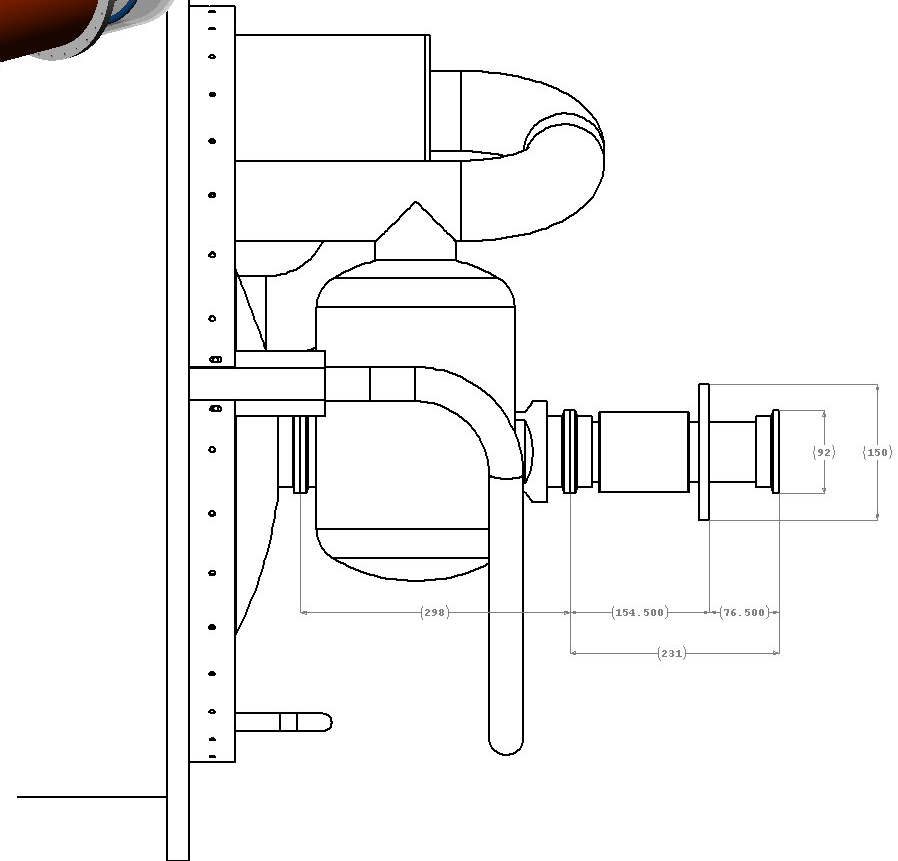
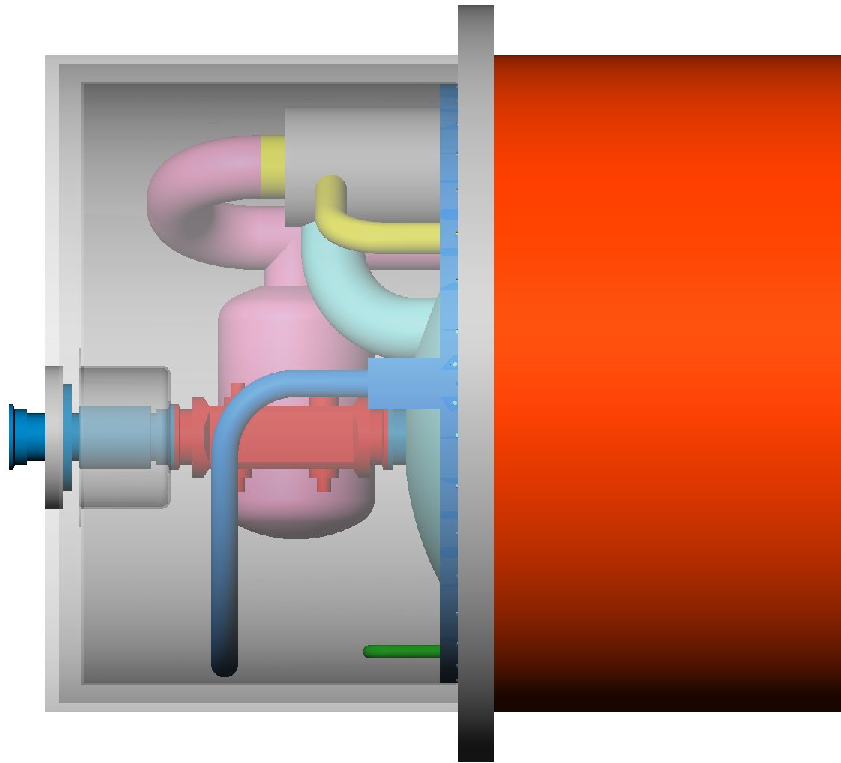
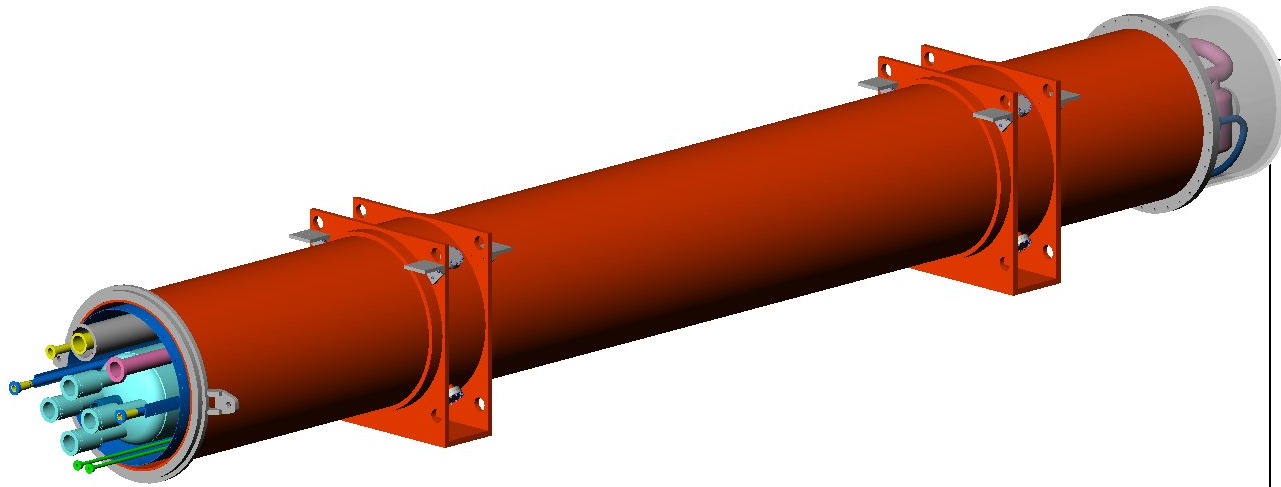
For ILC we would not use a magnetic yoke but still need some structure to contain the coil force.

LHC MQXA Parameters

Parameter	Unit	Design	operation (max.)
Field gradient	[T/m]	240	215
Peak magnetic field	[T]	9.6	8.6
Current	[A]	8057	7150
Coil inner radius	[mm]	35	
Cold mass outer radius	[mm]	245	
Magnetic length	[m]	6.3	
Stored energy	[MJ]	~2.8	~2.2

http://tdpc02.fnal.gov/nicol/lhc_irq_cryostat/index.html

Info' from Fermilab
on the LHC cryostat
design



**Outer cryostat is much bigger
than the cold mass.**